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APCBEE Procedia 1 (2012) 325 – 330

**Procedia  
APCBEE**[www.elsevier.com/locate/procedia](http://www.elsevier.com/locate/procedia)

ICESD 2012: 5-7 January 2012, Hong Kong

## Financing Coastal Land Use Planning: A Case Study of LUAS, Malaysia

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### Abstract

Managing natural resources sustainably is essential in this contemporary era of town planning system. This includes managing and planning the invaluable of coastal areas. In this regards, coastal management programmes have been acknowledged as a primary approach in delivering the coastal strategies and objectives towards achieving a sustainable coastal development worldwide. As such, this paper suggests that town planning system as one key element of coastal management that can and should make a substantial contribution to planning and managing coastal land uses in Malaysia. It has many positive implications to the environmental, social and economic sectors. In addition, financial element has become a significant attribute in implementing coastal management initiatives. This study offers input in planning literatures by addressing the integration of coastal management, town planning and financial elements which are very relevant with today's current global changes on environment as a whole.

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Selection and/or peer review under responsibility of Asia-Pacific Chemical, Biological & Environmental Engineering Society

*Keywords:* coastal management; financial; town planning; land use; sustainable.

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### 1. Introduction

Coastal management (CM) programmes have been acknowledged as an essential approach in delivering the coastal strategies and objectives towards achieving a sustainable coastal development. Globally, it is increasingly seen as an effective management tool working across sectoral, disciplinary and institutional boundaries to manage coastal resources [1]. It has many positive implications to the environmental, social and economic sectors. Its universal framework is applicable to any desired country to fulfill the nation aspiration to moving ahead in physical and socio-economic development and growth.

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In this regards, the financial factor has become a significant attribute in implementing CM initiatives. Many literatures demonstrate the influence and importance of financial in the practice of CM (refer [2,3,4,5]). As such, this paper discusses the relationship established between CM and financial aspects from the perspective of town planning (TP) which is considered as the field that has the ‘power’ to control and regulate land use changes within the land-side areas.

Malaysia is considered to be a maritime country as it is virtually surrounded by sea with abundant environmental resources for economic development with a coastline of total length 4,810km. The coasts of Malaysia experience enormous and numerous environmental and ecological problems due to massive development. The main problems are: beach erosion; resource depletion; environmental degradation; and destruction of natural habitat [6,7]; multiple use conflicts and multiple stakeholders with differing interests [8]; population expansion and rapid urbanisation [9]; massive tourism and recreational development [10]; and agricultural development, transportation and navigation [11]. This also includes other problems such as uncontrolled sand mining activities and over-exploitation of fishery resources. Recognising the importance of CM, the government has taken preliminary initiatives by providing many development guidelines about how to protect coastal areas although a sectoral approach is currently applied. Presently, there is no specific comprehensive national coastal legislation, administration system or a single coastal development authority to deal with coastal area in Peninsular Malaysia [10,12]. Malaysian CM is complicated by the involvement of a variety of agencies that operate sectorally and this has created conflict of interest, overlapping and duplication. The main government departments which have a sectoral interest in coastal issues are the Department of Irrigation and Drainage (DID), the Department of Environment (DOE), the Town and Country Planning Department (TCPD) and the Department of Fisheries (DOF). So far, Malaysian has several CM programmes: the first pilot CM project was undertaken at State level in South Johore; three pilot projects were undertaken in Sabah, Sarawak and Penang (1996), with assistance from the Danish Co-operation for Environment and Development (DANCED): Port Klang CM programme was undertaken in 2001 which operated at a local level. The latest outcome of CM for the nation is National Plan for Coastal Zone, prepared by TCPD in 2011.

### 1.1. Methodology

The context of the study begins with CM whereby it is generally is a broad topic which TP is recognised as part of its entire system. CM is known as a concept focusing on the development and planning of coastal areas whereby it depends on town planning to regulate and control the development within its jurisdiction. To achieve a comprehensive study within the scope of coastal management, it requires longer time and other resources in which this small project could not afford to cater them all.

In conducting the research, it involved three phases (Table 1). The first phase explores the fundamental ideas and principles behind the entire research exercise and helps develop the thinking behind the choice of research methods. Fieldwork will be conducted during the second stage and the financial ability is the main concern at this stage. The last phase provides a synthesis of all material and the development of the research recommendations. It offers the material for the conclusions of the research.

Table 1. Outline of research activities

Phase	Name of phase	Main activities
First phase	Introduction	<ul style="list-style-type: none"> <li>• Background study</li> <li>• Objectives of study</li> <li>• Identifying research questions</li> <li>• Scope of study</li> </ul>

	Literature review	<ul style="list-style-type: none"> <li>• Reviewing literature</li> <li>• <u>Highlighting important points of findings of the literatures</u></li> </ul>
Second phase	Research methodology	<ul style="list-style-type: none"> <li>• Constructing methods of data collection (field works, office visits, interviews)</li> </ul>
	Data analysis and findings	<ul style="list-style-type: none"> <li>• Conducting data collection</li> <li>• Primary research</li> <li>• Conducting analysis and discussion</li> <li>• <u>Deriving results and findings</u></li> </ul>
Third phase	Recommendations and Conclusion	<ul style="list-style-type: none"> <li>• Synthesising</li> <li>• Recommendations</li> <li>• Concluding the research</li> </ul>

## 2. Results and Discussion

### 2.1. Financial Aspect in Coastal Management Programmes

Integrating the financial aspect in CM approach is important especially in understanding the cost of undertaking one and ascertaining whether the outcomes are worth the money spent [3]. Financial investment is also considered as the backbone of successful CM. Without the essential financial support, CM will not be initiated and implemented. In Malaysia, research on the incorporation of financial aspect in CM initiatives is currently unavailable. Experiences from other countries in the regional setting, e.g. the Philippines, also indicate that there is lacking of research on the relationship between financial and CM. Literature shows that the success of most CM programmes depends, largely, on the ability of municipalities to secure adequate financial for CM initiatives [2]. Local Planning Authority (LPA) is responsible for the implementation of CM programmes in which they need to decide on the measures to be implemented in the maintenance and up-keep of the shoreline. These decisions have to be appropriate for the sustainability of the habitats. For instance, there are three levels of response in efforts to combat coastal erosion and its negative impacts on society can be distinguished in the appraisal of projects in this area: planning or policy; engineering or implementation; and financial.

### 2.2. LUAS Experience in Port Klang Integrated Coastal Management (ICM) Programme

The ICM initiative in Port Klang was set up as part of various efforts, involving several coastal nations in south east Asian region. The International Maritime Organisation (IMO) established a Regional Programme office in Manila, Philippines, under the ‘Partnership in Environmental Management for the Seas of East Asia’ (PEMSEA) programme. Port Klang was chosen as ‘pioneer area and National Demonstration site’ under the PEMSEA programme. The programme was known as Port Klang Coastal Strategy. The project area covers 7,960 kilometers square and comprises the Klang District, the Kuala Langat District and all the islands that fall under the jurisdiction of these districts (Figure1). There are two local authorities involved: Klang Municipal Council; and Kuala Langat District Council. This project area is sufficiently close to Kuala Lumpur to experience its direct influence and impacts on the eastern part of the area.

The coastal of Port Klang are important for many reasons: as a source of livelihood; for its natural beauty; for its ecological functions; for its historical and cultural heritage; and for its economic activities. This area has experienced both the positive and negative impacts of development within its catchment, including generating employment in tourism and beach erosion. Thus, there is a need to harmonise economic development and environmental conservation. Port Klang Coastal Strategy is the main plan for the Port Klang ICM programme. Other supporting plans are: Port Klang Initial Risk Assessment; Sea-use

Zonation Plan; Information, Education and Communication Plan; and Integrated Environmental Management Plan. The objective of the Port Klang Coastal Strategy is to provide stakeholders with a common vision and framework for their actions in using, managing and developing the coastal area. The objective is drawn from the principles of ICM and modified to the particular circumstances of the Port Klang coast. It is an important document that clearly defines a common vision, the mission, action plans and a programme. The policy making components in the Port Klang ICM programme consist of various elements including political support, policy changes, manpower, funding and institutional arrangements. The programme demonstrates that funding is one of key elements in implementing coastal strategies in the study area (Figure 2). However, the current practice indicates that there is lacking of coordination among the stakeholders in which it is done in a disintegrated manner. As a result, the element of funding does not involve properly in the programme which it leads to several issues, as follows:

- no emphasise was given to funding element when plan and manage coastal areas;
- record on itemised budgeting and spending expenditure is hardly available to see the priority sector of coastal management; and
- the importance of funding element in supporting the success of coastal management programme is not recognised in the study area.

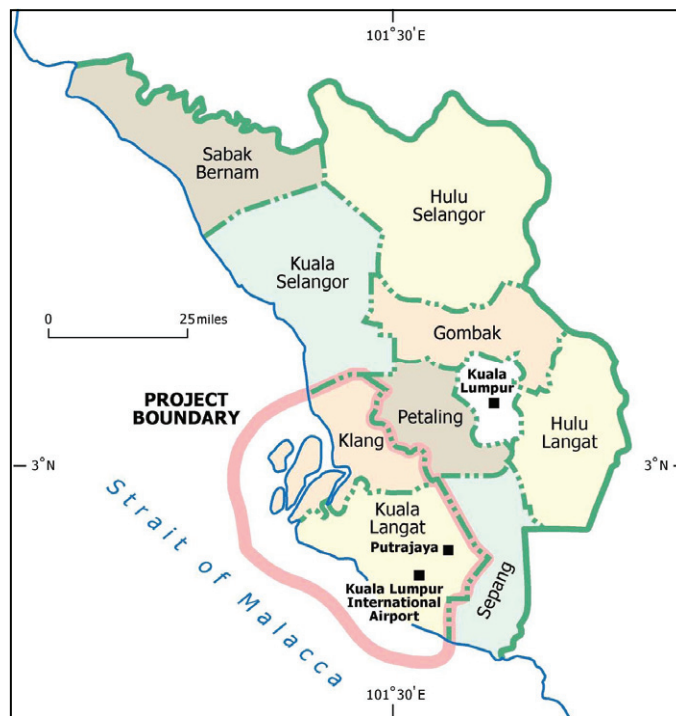


Fig. 1. Location of Port Klang ICM programme

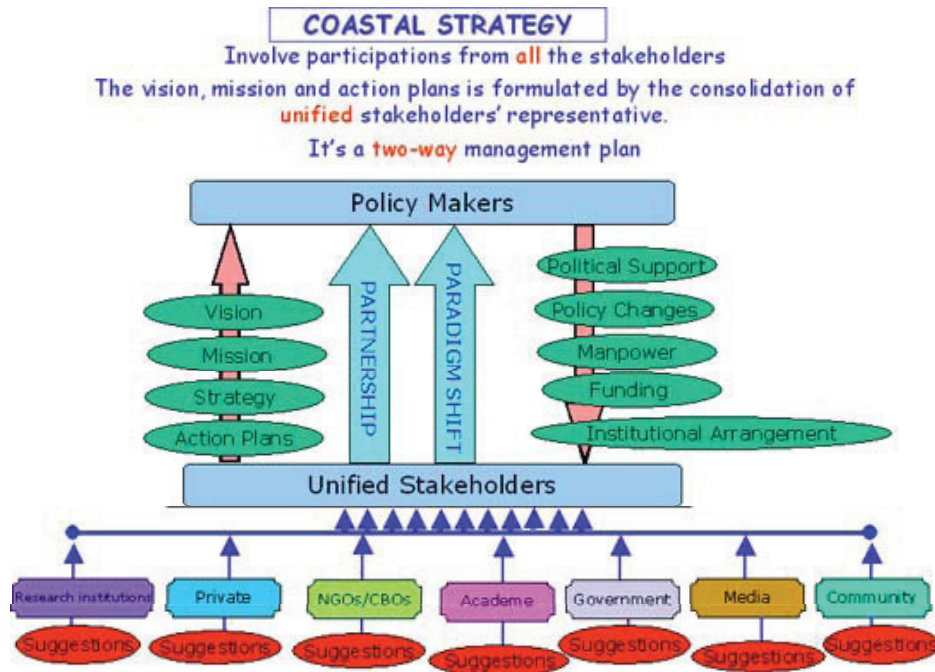


Fig. 2. Relationship between policy makers and stakeholders in Port Klang ICM programme

The experience of LUAS however offers opportunities for improvement in order to establish a good system of funding element in supporting coastal management initiatives. From the planning perspective, financial aspect is regarded as an important factor that can boost the implementation activities involved in planning coastal land use to ensure that a sustainable coastal development can be attained in the longer term. Generally, the preliminary study found that financing for CM efforts is insufficient to carry out the needed tasks efficiently. Most of the time, observations addressed key scenarios of the larger view point of financial associated problems. These perceptions can be grouped under two fundamental aspects. Firstly, the degree of the implementation of financial factor in CM is examined. Secondly, the potential of financial factor in sustaining the efforts of CM in Klang District is an important component to analyse.

### 3. Summary

This paper highlights that CM generally needs strong support from various aspects for its operation and implementation run smoothly. If CM is to succeed in Malaysia, it demands serious attention to resolve many planning and development issues in its present practice. Since town planning has a more firm foundation in Malaysia, it could be the key to the successful implementation of the development related aspects of CM. In line with that, this paper also urges the importance of financial aspect to be incorporated in the practice of CM to ensure the possibility of any CM programme to be successfully implemented is high. Though current experience of LUAS indicates that the inclusion of financial aspect in CM is still lacking, there are rooms for improvement in the future. It is hoped that the exercise of CM can be implemented within the umbrella of TP which takes into account the financial aspect in order to achieve sustainable coastal land use planning in Malaysia.

## Acknowledgements

This research gets financial support of the Ministry of Higher Education (MOHE), under the allocation of Fundamental Research Grant Scheme (FRGS) (grant no. FRGS 0510-133) and gets technical support from Research Management Centre of International Islamic University Malaysia. The views and opinions expressed herein are those of the authors and do not necessarily reflect the views of the funder.

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